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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,910	12/01/2003	Soo-Guy Rho	8071-43 (OPP 021181US)	3310
22150	7590	10/05/2005		
F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NY 11797			EXAMINER CHUNG, DAVID Y	
			ART UNIT 2871	PAPER NUMBER

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/724,910

Applicant(s)

RHO, SOO-GUY

Examiner

David Y. Chung

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 10-20, 22-26 and 29 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 8, 9, 21, 27, 28, 30 and 31 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**1. Claims 1-4, 10-20, 23-26 rejected under 35 U.S.C. 102(e) as being anticipated by Itoh et al. (U.S. 6,757,038).**

As to claims 1 and 24, note in figure 3, substrate 30A, color filters 44 and 45 formed over the substrate, and resin layer 36 formed on color filter 44 and having varying thickness.

As to claims 2 and 25, note in figure 3, the first display area 34, which is transmissive and the second display area 33, which is reflective. The transmissive display area uses light from backlight 2 while the reflective display area uses external ambient light.

As to claims 3, 4 and 26, the resin layer 36 has zero thickness in the transmissive display area 34. Therefore, it has smaller thickness in the transmissive display area 34 than in the reflective display area 33.

As to claim 10, Itoh et al. discloses that the counter substrate 30A has a counter electrode formed on it. See column 5, lines 43-50.

As to claim 11, Itoh et al. discloses that the liquid crystal panel comprises the array substrate 20 and counter substrate 30. See column 5, lines 10-15.

As to claim 12, figure 3 shows an array substrate 20 (display panel) opposite the counter substrate 30 (color filter panel). Note the transparent electrode 23 and reflective electrode 35. The reflective electrode 35 has openings corresponding to the transmissive display area.

As to claim 13, the portion of the resin layer 36 that has zero thickness in the first display area corresponds to the opening in reflective electrode 35.

As to claim 14, figure 1 shows the gate lines 11, data lines 12, thin film transistors 22 connected to the gate and data lines and the transparent electrodes 23.

As to claim 15, figure 3 shows liquid crystal layer 50 disposed between the two substrates.

As to claim 16, note in figure 3, the first display panel 30, the resin layer 36 having varying thickness, the second display panel 20 opposite the first display panel, the transparent electrode 23, and the reflective electrode 35. The reflective electrode 35 has an opening corresponding to the transmissive display area.

As to claims 17 and 18, the resin layer 36 has a first portion with a first thickness in the transmissive display area, and a second portion having zero thickness in the reflective display area which is opposite the opening in the reflective electrode 35.

As to claim 19, note in figure 3, the embossed surface of reflective electrode 35.

As to claim 20, note the circuit diagram of the array substrate in figure 1. Note the gate lines 11, data lines 12, thin film transistors 22, and transparent electrodes 23.

As to claim 23, note in figure 3, the liquid crystal layer 50 formed between the two substrates.

***Claim Rejections - 35 USC § 103***

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**2. Claims 7, 22 and 29 rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh et al. (U.S. 6,757,038).**

Itoh et al. discloses all elements except a black matrix located near the edge of the color filter. Huang teaches that it was conventional to form a black matrix to cover the area between two adjacent color filter elements in order to prevent light leakage. See column 1, lines 55-60. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to form a black matrix near the edge of the color filter in order to prevent light leakage.

***Allowable Subject Matter***

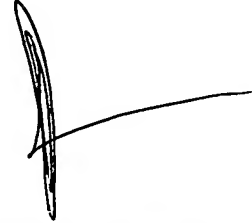
Claims 5, 6, 8, 9, 21, 27, 28, 30 and 31 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of Itoh et al. did not teach or suggest forming a color filter having a varying thickness.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Chung whose telephone number is (571) 272-2288. The examiner can normally be reached on Monday-Friday from 8:30 am to 5:00 pm.

A handwritten signature in black ink, appearing to be 'K. Parker', written over a horizontal line.

**KENNETH PARKER  
PRIMARY EXAMINER**

David Chung  
GAU 2871  
09/30/05